

WHAT IS CLAIMED IS:

1. A channel assigning method for assigning a channel for use in communication between a mobile station and a
5 base station having one or more service areas, said method comprising the steps of:

judging, when a request for channel assignment is issued, whether a condition that it is possible to assign both a channel for a service area based on a FDD method
10 and a channel for a service area based on a TDD method to said request, is satisfied; and

assigning the channel for the service area based on the FDD method to said request, if said condition is satisfied.

15 2. A channel assigning method for assigning a channel for use in communication between a mobile station and a base station having one or more service areas, said method comprising the steps of:

20 judging, when a request for channel assignment is issued, whether a condition that it is possible to assign both a channel for a service area based on a FDD method and a channel for a service area based on a TDD method to said request, and a handover frequency of the mobile
25 station related to said request is high, is satisfied; and

assigning the channel for the service area based on the FDD method to said request, if said condition is

satisfied.

3. A channel assigning method for assigning a channel for use in communication between a mobile station and a
5 base station having one or more service areas, said method comprising the steps of:

judging, when a request for channel assignment is issued, whether a condition that it is possible to assign both a channel for a service area based on a FDD method
10 and a channel for a service area based on a TDD method to said request, and a handover frequency of the mobile station related to said request is low, is satisfied; and
15 assigning the channel for the service area based on the TDD method to said request, if said condition is satisfied.

4. A channel assigning method for assigning a channel for use in communication between a mobile station and a base station having one or more service areas, said method
20 comprising the steps of:

judging, when a request for channel assignment is issued, whether a condition that it is possible to assign both a channel for a service area based on a FDD method and a channel for a service area based on a TDD method to
25 said request, and the maximum reception power value of a forward common channel of the mobile station related to said request is low, is satisfied; and

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assigning the channel for the service area based on the FDD method to said request, if said condition is satisfied.

- 5 5. A channel assigning method for assigning a channel for use in communication between a mobile station and a base station having one or more service areas, said method comprising the steps of:

judging, when a request for channel assignment is issued, whether a condition that it is possible to assign both a channel for a service area based on a FDD method and a channel for a service area based on a TDD method to said request, and the maximum reception power value of a forward common channel of the mobile station related to said request is high, is satisfied; and

assigning the channel for the service area based on the TDD method to said request, if said condition is satisfied.

- 20 6. A channel assigning method for assigning a channel for use in communication between a mobile station and a base station having one or more service areas, said method comprising the steps of:

judging, when a request for channel assignment is issued, whether a condition that it is possible to assign both a channel for a service area based on a FDD method and a channel for a service area based on a TDD method to

said request, is satisfied, and a type of communication related to said request; and

assigning either the channel for the service area based on the FDD method or the channel for the service area

- 5 based on the TDD method to said request depending on said type of communication, if said condition is satisfied.

7. The channel assigning method as claimed in claim 6, wherein said assigning step assigns the channel for the

- 10 service area based on the FDD method to said request, if said type of communication is voice communication and said condition is satisfied, and assigns the channel for the service area based on the TDD method to said request, if said type of communication is data communication and said 15 condition is satisfied.

8. A channel assigning method for assigning a channel for use in communication between a mobile station and a base station having one or more service areas, said method

- 20 comprising the steps of:

detecting a mobile station to which a channel for a service area based on a TDD method is currently assigned and a channel for a service area based on a FDD method can be assigned and whose handover frequency is high; and

- 25 switching the assigned channel of the detected mobile station from the channel for the service area based on the TDD method to the channel for the service area based on

the FDD method.

9. A channel assigning method for assigning a channel for use in communication between a mobile station and a
5 base station having one or more service areas, said method comprising the steps of:

detecting a mobile station to which a channel for a service area based on a FDD method is currently assigned and a channel for a service area based on a TDD method can
10 be assigned and whose handover frequency is low; and

switching the assigned channel of the detected mobile station from the channel for the service area based on the FDD method to the channel for the service area based on the TDD method.
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10. A channel assigning method for assigning a channel for use in communication between a mobile station and a base station having one or more service areas, said method comprising the steps of:

20 detecting a mobile station to which a channel for a service area based on a TDD method is currently assigned and a channel for a service area based on a FDD method can be assigned and whose transmission power is high; and

switching the assigned channel of the detected mobile
25 station from the channel for the service area based on the TDD method to the channel for the service area based on the FDD method.

11. A channel assigning method for assigning a channel for use in communication between a mobile station and a base station having one or more service areas, said method comprising the steps of:

detecting a mobile station to which a channel for a service area based on a FDD method is currently assigned and a channel for a service area based on a TDD method can be assigned and whose transmission power is low; and

10 switching the assigned channel of the detected mobile station from the channel for the service area based on the FDD method to the channel for the service area based on the TDD method.

15 12. A channel assigning method for assigning a channel for use in communication between a mobile station and a base station having one or more service areas, said method comprising the steps of:

detecting a mobile station to which a channel for a service area based on a TDD method is currently assigned and a channel for a service area based on a FDD method can be assigned and whose reception power of a forward common channel of a base station with which the mobile station currently communicates is low; and

25 switching the assigned channel of the detected mobile station from the channel for the service area based on the TDD method to the channel for the service area based on

the FDD method.

13. A channel assigning method for assigning a channel
for use in communication between a mobile station and a
5 base station having one or more service areas, said method
comprising the steps of:

detecting a mobile station to which a channel for a
service area based on a FDD method is currently assigned
and a channel for a service area based on a TDD method can
10 be assigned and whose reception power of a forward common
channel of a base station with which the mobile station
currently communicates is high; and

switching the assigned channel of the detected mobile
station from the channel for the service area based on the
15 FDD method to the channel for the service area based on
the TDD method.

14. A channel assigning method for assigning a channel
for use in communication between a mobile station and a
20 base station having one or more service areas, said method
comprising the steps of:

detecting a mobile station to which a channel for a
service area based on a TDD method is currently assigned
and a channel for a service area based on a FDD method can
25 be assigned and which has a balance between reverse traffic
and forward traffic; and

switching the assigned channel of the detected mobile

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station from the channel for the service area based on the TDD method to the channel for the service area based on the FDD method.

- 5 15. A channel assigning method for assigning a channel
for use in communication between a mobile station and a
base station having one or more service areas, said method
comprising the steps of:

detecting a mobile station to which a channel for a
10 service area based on a FDD method is currently assigned
and a channel for a service area based on a TDD method can
be assigned and which does not have a balance between
reverse traffic and forward traffic; and

switching the assigned channel of the detected mobile
15 station from the channel for the service area based on the
FDD method to the channel for the service area based on
the TDD method.

16. A channel assigning method for assigning a channel
20 for use in communication between a mobile station and a
base station having one or more service areas, said method
comprising the steps of:

detecting a mobile station to which a channel for a
service area based on a TDD method is currently assigned
25 and a channel for a service area based on a FDD method can
be assigned and which achieves a balance between reverse
traffic and forward traffic of the service area based on

the FDD method, if the assigned channel of the mobile station is switched from the channel for the service area based on the TDD method to the channel for the service area based on the FDD method; and

5 switching the assigned channel of the detected mobile station from the channel for the service area based on the TDD method to the channel for the service area based on the FDD method.

10 17. A channel assigning method for assigning a channel for use in communication between a mobile station and a base station having one or more service areas, said method comprising the steps of:

15 detecting a mobile station to which a channel for a service area based on a FDD method is currently assigned and a channel for a service area based on a TDD method can be assigned and which achieves a balance between reverse traffic and forward traffic of the service area based on the FDD method, if the assigned channel of the mobile station is switched from the channel for the service area based on the FDD method to the channel for the service area based on the TDD method; and

20 switching the assigned channel of the detected mobile station from the channel for the service area based on the FDD method to the channel for the service area based on the TDD method.

18. A channel assigning method for assigning a channel for use in communication between a mobile station and a base station having one or more service areas, said method comprising the steps of:

5 detecting a mobile station to which a channel for a service area based on a TDD method is currently assigned and a channel for a service area based on a FDD method can be assigned and which currently performs a particular type of communication; and

10 switching the assigned channel of the detected mobile station from the channel for the service area based on the TDD method to the channel for the service area based on the FDD method.

15 19. The channel assigning method as claimed in claim 18, wherein said particular type of communication is voice communication.

20 20. A channel assigning method for assigning a channel for use in communication between a mobile station and a base station having one or more service areas, said method comprising the steps of:

25 detecting a mobile station to which a channel for a service area based on a FDD method is currently assigned and a channel for a service area based on a TDD method can be assigned and which currently performs a particular type of communication; and

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switching the assigned channel of the detected mobile station from the channel for the service area based on the FDD method to the channel for the service area based on the TDD method.

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21. The channel assigning method as claimed in claim 20, wherein said particular type of communication is data communication.

10 22. The channel assigning method as claimed in claim 8, 10, 12, 14, 16 or 18, wherein said detecting step is performed, if traffic or interference of the service area based on the TDD method is high.

15 23. The channel assigning method as claimed in claim 9, 11, 13, 15, 17 or 20, wherein said detecting step is performed, if traffic or interference of the service area based on the FDD method is high.

20 24. A channel assigning method for assigning a channel for use in communication between a mobile station and a base station having one or more service areas, said method comprising the steps of:

25 detecting a mobile station to which a channel for a service area based on a TDD method is currently assigned and a channel for a service area based on a FDD method can be assigned, if traffic or interference of the service area

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based on the TDD method is high; and
switching the assigned channel of the detected mobile
station from the channel for the service area based on the
TDD method to the channel for the service area based on
the FDD method.

5 25. A channel assigning method for assigning a channel
for use in communication between a mobile station and a
base station having one or more service areas, said method
10 comprising the steps of:

15 detecting a mobile station to which a channel for a
service area based on a FDD method is currently assigned
and a channel for a service area based on a TDD method can
be assigned, if traffic or interference of the service area
based on the FDD method is high; and

16 switching the assigned channel of the detected mobile
station from the channel for the service area based on the
FDD method to the channel for the service area based on
the TDD method.

20 26. The channel assigning method as claimed in any one
of claims 1-6, 8-18, 20, 24 and 25, wherein said FDD method
is a CDMA-FDD method and said TDD method is a CDMA-TDD
method.

25 27. A communication apparatus for assigning a channel for
use in communication between a mobile station and a base

station having one or more service areas, said apparatus comprising:

means for judging, when a request for channel assignment is issued, whether a condition that it is

5 possible to assign both a channel for a service area based on a FDD method and a channel for a service area based on a TDD method to said request, is satisfied; and

means for assigning the channel for the service area based on the FDD method to said request, if said condition
10 is satisfied.

28. A communication apparatus for assigning a channel for use in communication between a mobile station and a base station having one or more service areas, said apparatus comprising:

means for judging, when a request for channel assignment is issued, whether a condition that it is possible to assign both a channel for a service area based on a FDD method and a channel for a service area based on a TDD method to said request, and a handover frequency of
20 the mobile station related to said request is high, is satisfied; and

means for assigning the channel for the service area based on the FDD method to said request, if said condition
25 is satisfied.

29. A communication apparatus for assigning a channel for

use in communication between a mobile station and a base station having one or more service areas, said apparatus comprising:

means for judging, when a request for channel

- 5 assignment is issued, whether a condition that it is
possible to assign both a channel for a service area based
on a FDD method and a channel for a service area based on
a TDD method to said request, and a handover frequency of
the mobile station related to said request is low, is
10 satisfied; and

means for assigning the channel for the service area based on the TDD method to said request, if said condition is satisfied.

15 30. A communication apparatus for assigning a channel for
use in communication between a mobile station and a base
station having one or more service areas, said apparatus
comprising:

means for judging, when a request for channel

- 20 assignment is issued, whether a condition that it is
possible to assign both a channel for a service area based
on a FDD method and a channel for a service area based on
a TDD method to said request, and the maximum reception
power value of a forward common channel of the mobile
25 station related to said request is low, is satisfied; and

means for assigning the channel for the service area based on the FDD method to said request, if said condition

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is satisfied.

31. A communication apparatus for assigning a channel for use in communication between a mobile station and a base station having one or more service areas, said apparatus comprising:

means for judging, when a request for channel assignment is issued, whether a condition that it is possible to assign both a channel for a service area based

- 10 on a FDD method and a channel for a service area based on a TDD method to said request, and the maximum reception power value of a forward common channel of the mobile station related to said request is high, is satisfied; and
means for assigning the channel for the service area
- 15 based on the TDD method to said request, if said condition is satisfied.

32. A communication apparatus for assigning a channel for use in communication between a mobile station and a base station having one or more service areas, said apparatus comprising:

means for judging, when a request for channel assignment is issued, whether a condition that it is possible to assign both a channel for a service area based

25 on a FDD method and a channel for a service area based on a TDD method to said request, is satisfied, and a type of communication related to said request; and

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means for assigning either the channel for the service area based on the FDD method or the channel for the service area based on the TDD method to said request depending on said type of communication, if said condition
5 is satisfied.

33. A communication apparatus for assigning a channel for use in communication between a mobile station and a base station having one or more service areas, said apparatus
10 comprising:

means for detecting a mobile station to which a channel for a service area based on a TDD method is currently assigned and a channel for a service area based on a FDD method can be assigned and whose handover frequency
15 is high; and

means for switching the assigned channel of the detected mobile station from the channel for the service area based on the TDD method to the channel for the service area based on the FDD method.

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34. A communication apparatus for assigning a channel for use in communication between a mobile station and a base station having one or more service areas, said apparatus comprising:
comprising:

25 means for detecting a mobile station to which a channel for a service area based on a FDD method is currently assigned and a channel for a service area based

on a TDD method can be assigned and whose handover frequency
is low; and

means for switching the assigned channel of the
detected mobile station from the channel for the service
5 area based on the FDD method to the channel for the service
area based on the TDD method.

35. A communication apparatus for assigning a channel for
use in communication between a mobile station and a base
10 station having one or more service areas, said apparatus
comprising:

means for detecting a mobile station to which a
channel for a service area based on a TDD method is
currently assigned and a channel for a service area based
15 on a FDD method can be assigned and whose transmission power
is high; and

means for switching the assigned channel of the
detected mobile station from the channel for the service
area based on the TDD method to the channel for the service
20 area based on the FDD method.

36. A communication apparatus for assigning a channel for
use in communication between a mobile station and a base
station having one or more service areas, said apparatus
25 comprising:

means for detecting a mobile station to which a
channel for a service area based on a FDD method is

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currently assigned and a channel for a service area based on a TDD method can be assigned and whose transmission power is low; and

means for switching the assigned channel of the

- 5 detected mobile station from the channel for the service area based on the FDD method to the channel for the service area based on the TDD method.

37. A communication apparatus for assigning a channel for

- 10 use in communication between a mobile station and a base station having one or more service areas, said apparatus comprising:

means for detecting a mobile station to which a channel for a service area based on a TDD method is

- 15 currently assigned and a channel for a service area based on a FDD method can be assigned and whose reception power of a forward common channel of a base station with which the mobile station currently communicates is low; and

means for switching the assigned channel of the

- 20 detected mobile station from the channel for the service area based on the TDD method to the channel for the service area based on the FDD method.

38. A communication apparatus for assigning a channel for

- 25 use in communication between a mobile station and a base station having one or more service areas, said apparatus comprising:

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means for detecting a mobile station to which a channel for a service area based on a FDD method is currently assigned and a channel for a service area based on a TDD method can be assigned and whose reception power
5 of a forward common channel of a base station with which the mobile station currently communicates is high; and
means for switching the assigned channel of the detected mobile station from the channel for the service area based on the FDD method to the channel for the service
10 area based on the TDD method.

39. A communication apparatus for assigning a channel for use in communication between a mobile station and a base station having one or more service areas, said apparatus
15 comprising:

means for detecting a mobile station to which a channel for a service area based on a TDD method is currently assigned and a channel for a service area based on a FDD method can be assigned and which has a balance
20 between reverse traffic and forward traffic; and
means for switching the assigned channel of the detected mobile station from the channel for the service area based on the TDD method to the channel for the service area based on the FDD method.

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40. A communication apparatus for assigning a channel for use in communication between a mobile station and a base

station having one or more service areas, said apparatus comprising:

means for detecting a mobile station to which a channel for a service area based on a FDD method is currently assigned and a channel for a service area based on a TDD method can be assigned and which does not have a balance between reverse traffic and forward traffic; and

means for switching the assigned channel of the detected mobile station from the channel for the service area based on the FDD method to the channel for the service area based on the TDD method.

41. A communication apparatus for assigning a channel for use in communication between a mobile station and a base station having one or more service areas, said apparatus comprising:

means for detecting a mobile station to which a channel for a service area based on a TDD method is currently assigned and a channel for a service area based on a FDD method can be assigned and which achieves a balance between reverse traffic and forward traffic of the service area based on the FDD method, if the assigned channel of the mobile station is switched from the channel for the service area based on the TDD method to the channel for the service area based on the FDD method; and

means for switching the assigned channel of the detected mobile station from the channel for the service

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area based on the TDD method to the channel for the service area based on the FDD method.

42. A communication apparatus for assigning a channel for use in communication between a mobile station and a base station having one or more service areas, said apparatus comprising:

means for detecting a mobile station to which a channel for a service area based on a FDD method is currently assigned and a channel for a service area based on a TDD method can be assigned and which achieves a balance between reverse traffic and forward traffic of the service area based on the FDD method, if the assigned channel of the mobile station is switched from the channel for the service area based on the FDD method to the channel for the service area based on the TDD method; and

means for switching the assigned channel of the detected mobile station from the channel for the service area based on the FDD method to the channel for the service area based on the TDD method.

43. A communication apparatus for assigning a channel for use in communication between a mobile station and a base station having one or more service areas, said apparatus comprising:

means for detecting a mobile station to which a channel for a service area based on a TDD method is

currently assigned and a channel for a service area based on a FDD method can be assigned and which currently performs a particular type of communication; and

means for switching the assigned channel of the

- 5 detected mobile station from the channel for the service area based on the TDD method to the channel for the service area based on the FDD method.

44. A communication apparatus for assigning a channel for
10 use in communication between a mobile station and a base station having one or more service areas, said apparatus comprising:

means for detecting a mobile station to which a channel for a service area based on a FDD method is

- 15 currently assigned and a channel for a service area based on a TDD method can be assigned and which currently performs a particular type of communication; and

means for switching the assigned channel of the detected mobile station from the channel for the service area based on the FDD method to the channel for the service area based on the TDD method.

45. A communication apparatus for assigning a channel for
use in communication between a mobile station and a base
25 station having one or more service areas, said apparatus comprising:

means for detecting a mobile station to which a

channel for a service area based on a TDD method is currently assigned and a channel for a service area based on a FDD method can be assigned, if traffic or interference of the service area based on the TDD method is high; and

5 means for switching the assigned channel of the detected mobile station from the channel for the service area based on the TDD method to the channel for the service area based on the FDD method.

10 46. A communication apparatus for assigning a channel for use in communication between a mobile station and a base station having one or more service areas, said apparatus comprising:

means for detecting a mobile station to which a
15 channel for a service area based on a FDD method is currently assigned and a channel for a service area based on a TDD method can be assigned, if traffic or interference of the service area based on the FDD method is high; and

20 means for switching the assigned channel of the detected mobile station from the channel for the service area based on the FDD method to the channel for the service area based on the TDD method.

47. The communication apparatus as claimed in any one of
25 claims 27-46, wherein said communication apparatus is a control station which controls a base station.

48. The communication apparatus as claimed in any one of claims 27-46, wherein said communication apparatus is a base station.

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